Development of the

Nevada Pretrial Risk Assessment System

Final Report

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Introduction

This report summarizes how the Nevada Pretrial Risk Assessment (NPR) was developed. It provides a description of the procedures and research methods (including sampling process, data collection and analysis) that were used to create a validated instrument for Nevada's criminal courts. It should be emphasized that further testing and analysis will be required as the NPR is used on a pilot basis for Clark, Washoe and White Pine counties over the next 12 months.

This study was supported by the U.S. Department of Justice, Office of Justice Programs, which provides technical assistance to state and local criminal agencies through its Diagnostic Center program. This technical assistance effort was coordinated by Angela Jackson-Castain who provided all of the administrative and management for the project.

Development of the Proto-type Instrument

Under the leadership of Associate Chief Justice James W. Hardesty, a Committee to Study Evidence-Based Pretrial Release in Nevada was convened in 2015. The purpose of the Committee was to study the current pretrial release system and to examine alternatives and improvements to that system through evidence-based practices and current risk assessment tools. As part of its work, the Committee held several meetings during which it receive information on a variety of pretrial risk instruments that have been implemented in numerous jurisdictions. These reviews included in formation on the Arnold Foundation, COMPAS, and Ohio Risk Assessment System (ORAS).

It was decided that it would be preferable to develop a customized pretrial risk instrument that incorporated all of the positive attributes of these risk instruments but had the advantage of being tested and normed on defendants being released in Nevada.

The first step was to create a proto-type instrument that was presented to the Committee in February 2016. Referred to as the Nevada Pretrial Risk (NPR) instrument, Committee members were briefed on its design and were asked to offer constructive recommendations to modify the proposed NPR or other factors that should be considered. The initial NPR instrument also included information on other potential risk factors that could be tested as part of the validation effort.

The following nine items were selected to be on the prototype instrument:

1. Existing pending criminal case at time of current offense;
2. Age at first arrest (adult or juvenile);
3. Prior misdemeanor arrests;

4. Prior felony or gross misdemeanor arrests;
5. Prior arrests for violent crimes;
6. Prior FTA's past two years;
7. Current employment status;
8. Current residency; and,
9. Indications of substance abuse.

The weights for each of the nine scoring items and the overall risk scale were based on prior studies of other similar risk instruments. In particular the ORAS was relied upon as several of the NPR factors were based on that system. However, it was expected that both the weights and scale would be modified after the data were collected and analyzed.

By the close of February 2016 the prototype instrument was completed and was ready to be pilot tested on a representative sample of released defendants.

Sampling Process

The next task was to create a sample of defendants who had been released from custody in the three target counties. The plan was to have the prototype instrument completed on each cases that was sampled. In doing so, the following goals of the pilot test would be completed:

1. Description of the types of people currently being released in pretrial status in terms of their demographics, offense, and criminal history;
2. The methods of release and time in custody prior to release;
3. Re-arrest and Failure to Appear (FTA) rates;
4. Testing of the prototype instrument in terms of its validity; and,
5. Methods for improving the NPR predictive qualities.

Four separate samples of cases were created. In Clark county, two random samples were created for defendants released from either the Clark County Detention Center or the Las Vegas City Jail in 2014.[1] A third random sample was created for people released from the Washoe County Detention facility in 2014. Finally, a fourth sample that consisted of all defendants also released in 2014 from White Pine County. Because the number of people released from that county was so small there was no need to actually sample the cases.

There were a total of 1,160 cases originally sampled from the data files received from the four jurisdictions. Of that number 1,057 (91%) were finally captured and used for analysis. Virtually all of the 101 deleted cases presented jail releases that were not pretrial releases (e.g., credit for time served, transferred to state prison,

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[1] The SPSS random number generator was used to select samples that reached a specific threshold sufficient for statistical analysis within each jurisdiction.

etc.). Statistical tests were performed to ensure that both the original and final samples were comparable to the original universe of pretrial releases for all four sites.

Table 1. Sample and Final Sample Sizes

County	2014 Pretrial Releases	Original Sample	Final Sample
Clark			
Detention Center	7,172	416	406
Municipal Jail	5,419	259	179
Washoe	5,982	421	410
White Pine	63	63	62
Total	18,637	1,160	1,057

Data Collection

Once the samples were created, the names and identifiers of the sampled cases were forwarded to designated criminal court staff (typically pretrial service agency staff) with instructions on how to complete the prototype form. There were several conference calls between these staff to address questions on how to collect and record data on the form. The forms were sent to the consultants on a regular basis and double-checked for accuracy. The data were hand entered into a spreadsheet and then converted to an SPSS data file for statistical analysis.

Table 2 summarizes the key attributes of the sampled cases by the four jurisdictions. There are both similarities and differences among the four sites. Across the sites, the vast majority are males who reside in Nevada. Regarding race and ethnicity, Washoe County had predominantly white defendants while Clark County had higher proportions of Black and Hispanic defendants. The dominant forms of release were Own Recognizance and Surety Bond. The average and median bail amounts ranged form $3,251 (Clark Muni) to $19,122 (Clark Detention Center). Many of the defendants had prior misdemeanor, gross misdemeanor and felony arrest histories.

Analysis

The two key dependent variables that were recorded on each sampled case were 1) whether the released defendant was rearrested for a new crime and 2) whether there was a bench warrant issued for failing to appear (FTA) for any scheduled court hearing.

Table 2. Key Attributes of the Pretrial Releases by Jurisdiction

Attribute	Clark	Clark Muni	Washoe	White Pines	Total
Releases	406	179	410	62	1,057
Gender					
Male	77%	73%	85%	77%	80%
Female	23%	27%	15%	23%	20%
Race					
White	46%	40%	66%	NA	50%
Black	30%	30%	11%	NA	21%
Hispanic	16%	26%	18%	NA	18%
Asian	6%	3%	1%	NA	3%
Other	2%	1%	4%	NA	8%
Method of Release					
Cash Bail	3%	10%	9%	10%	7%
Surety Bond	37%	23%	36%	63%	35%
OR	46%	31%	55%	26%	46%
Other	14%	36%	0%	1%	12%
Nevada Resident	78%	74%	86%	81%	81%
LOS Prior Release	15	8	12	5	12
Ave. Bail	$19,122	$3,251	$8,043	$12,563	$11,674
Median Bail	$10,000	$2,115	$2,500	$9,000	$5,000
Ave Prior Misd Arrests	6	3	2	3	4
Ave Prior Fel/GM Arrests	4	1	2	2	3

Validation analysis was designed to determine if the scoring items that were contained on the proto-type NPR instrument were statistically associated with either the rate of re-arrest or FTA.

A "composite" dependent variable that measured whether the person was either re-arrested or had an FTA was also constructed although the FTA is measuring a somewhat different phenomenon (criminal behavior versus non-compliance with a court order).

Table 3 shows the re-arrest, FTA and composite rates for the four jurisdictions. The overall re-arrest rates is 135 with White Pine having the highest rate (23%) and Clark Muni having the lowest (3%). Conversely, Clark Detention Center has the highest FTA rate (28%) followed by White Pine. These two jurisdictions also have the higher composite rate of 37% and 36%. Compared to other jurisdictions, the low re-arrest rates are comparable with the exception of White Pine (23%). Clark Detention Center releases have a higher FTA rate then one would expect. This

higher FTA rate could be a function of the risk levels for Clark Detention Center releases and/or pretrial supervision options and methods.

It should also be noted that 73% of the people who had an FTA warrant issued against them did not have any re-arrests for criminal charges (Table 4). Conversely, of the 135 people who were re-arrested, 62% of them had no FTA warrants issued. As has been noted in the other studies, FTA behavior should be viewed as distinct from re-arrest behavior.

Table 3. Re-Arrest and FTA Rates By Jurisdiction

Attribute	Clark	Clark Muni	Washoe	White Pines	Total
Releases	406	179	410	62	1,057
Re-Arrest	16%	3%	12%	23%	13%
FTA	28%	16%	9%	19%	18%
Arrest or FTA	37%	17%	17%	36%	26%

Table 4. Re-Arrest by FTAs

Re-Arrested	FTA No	Yes	Total
No	784	138 (73%)	922
Yes	84 (62%)	51	135
Total	868	189	1057

The next level of analysis was to test the prototype instrument against the outcome measures of re-arrest, FTA and the composite FTA or Re-arrest rates. It was expected that there would be some tweaking of the proto-type instrument's nine scoring item's weights and the overall risk scale. Consequently, a number of statistical runs were completed to find those factors that had the strongest relationship with the dependent variables. While all of the nine scoring items had statistically significant bivariate relationships, there were some subcategories that were not performing well in terms of risk assessment. Consequently, it was necessary to either modify or consolidate certain subcategories. There was also an effort to see if some "non-scoring items" were predictive and should be added to the NPR. This re-assessment process produced the following adjustments to the prototype NPR:

1. Added the factor of possession of valid cell phone number (non-cell phone releases had a higher FTA rate);
2. Consolidated the substance abuse factor by only using prior drug/alcohol related arrests (other measures of drug use were not valid);

3. Modified the residence factor by adding whether the person was a resident of Nevada (non- residents have a higher FTA rate);
4. Consolidated prior misdemeanor arrest score so that 3 or more receive 2 points (no difference in rates by 3-5 and 6 or more categories);
5. Consolidated prior felony/gross misdemeanor arrests score so that 2 or more are scored as 2 points (no difference in rates by other categories); and,
6. Re-calibrated the overall scale so that it matches the new scoring process.

Based on these changes the overall validity of the instrument (see appendix A for a copy of the modified instrument) is shown in Figures 1 and 2.

In terms of re-arrest rates, the scored low risk group has a very low risk (4%) of being arrested for a new crime until their cases are disposed of. But even the vast majority of the "higher risk" group is also very unlikely (73%) to be re-arrested while awaiting the disposition of their criminal cases. Looking at the composite rates, 85% of low risk people will neither be re-arrested or FTA. Conversely, 59% of the higher risk group will not be re-arrested or FTA. But this group only accounts for 15% of all releases (Figure 2).

Summary

Based on these results, the modified NPR has proven to be a statistically valid pretrial risk instrument that meets industry standards in terms of the factors being used and their overall predictive accuracy. The NPR has been normed on representative samples of the four jurisdictions that were involved in the pilot test. It is now ready to be implemented in the four jurisdictions. Additional training will be required for 1) staff who will be using the instrument to score pretrial defendants and 2) court officials who will be using the results to make pretrial release decisions.

Figure 1. Re-arrest, FTA and Composite Rates By Risk Level

Figure 2. Risk Levels
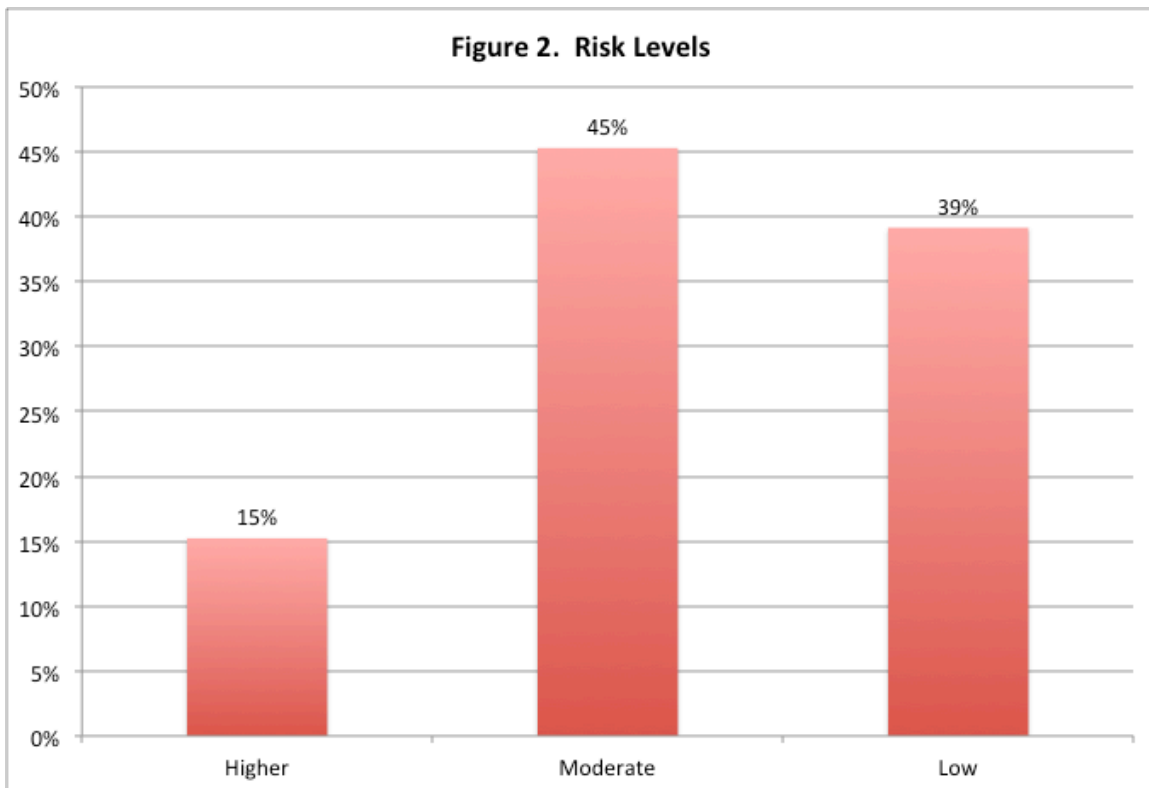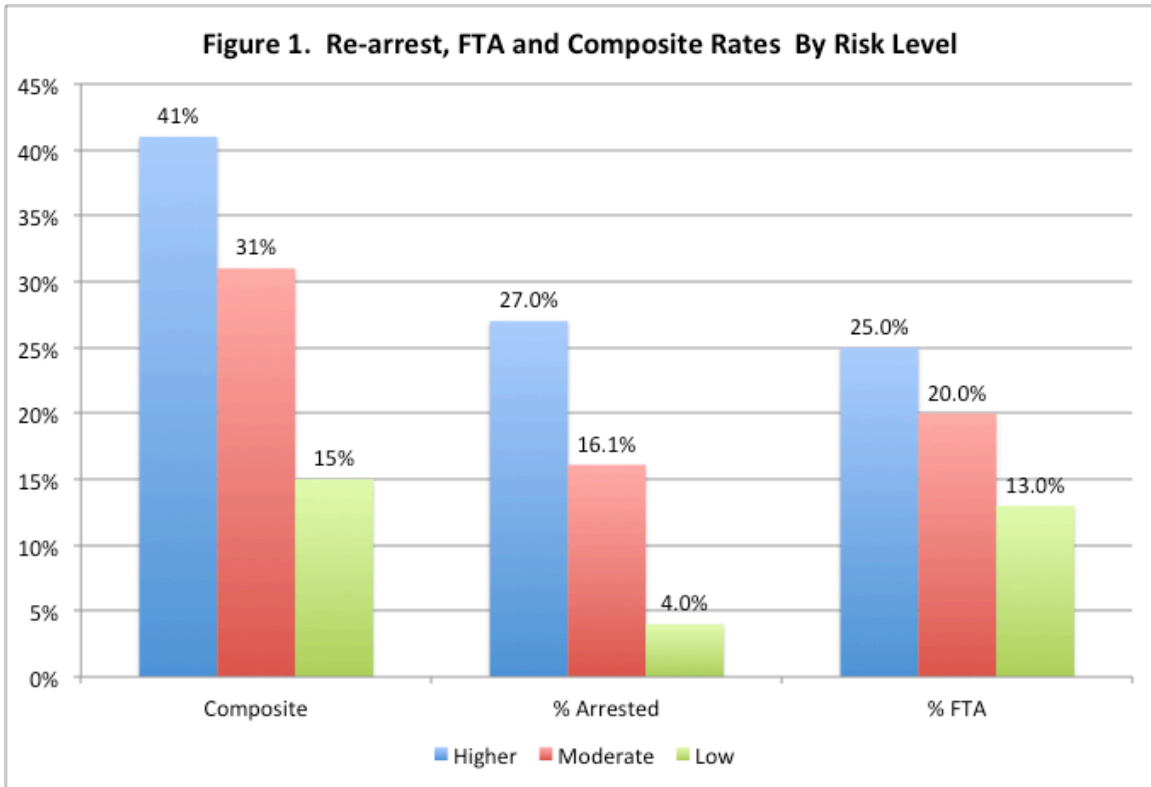
Finalized Nevada Pretrial Risk Instrument

NEVADA PRETRIAL RISK ASSESSMENT (NPR)

Defendant's Name: _____ Assessment Date: _____/_____/_____

Case #:_____ County: _____ Assessor:_____

Most Serious Charge: _____ Initial Total Bail Set: $ _____

Verified Cell Phone #: _____ Address: _____ _____ _____
                                                          City   State   Zip

SCORING ITEMS   **SCORE**

1. Does the Defendant Have a Pending Case at Booking?
    a. Yes - 2 pts.   b. No - 0 pts.   _____
2. Age at First Arrest
    a. Under age 21 yrs. - 2 pts.
    b. 22-35 yrs. - 1pt.
    c. 36 Plus. - 0 pts.   _____
3. Prior Misdemeanor Arrests.
    a. Two or less– 0 pts.
    b. 3 or more – 2 pts.   _____
4. Prior Felony/Gross Misd Arrests
    a. None or One – 0 pts.
    b. 2 or more – 2pts.   _____
5. Prior Arrests – Violence:
    a. None – 0 pts.
    b. 1 or more - 2 pts.   _____
6. Prior FTAs Past 24 Months
    a. None – 0 pts.
    b. 1 FTA Warrant – 1 pt.
    c. 2 or more FTA Warrants – 2 pts.   _____
7. Employment Status at Arrest
    a. Employed or Student or Retired – 0 pts.
    b. Unemployed – 2 pts.   _____
8. Residential Status   Date of Residency: ____/_____
    a. Nevada Resident - Living in current residence 6 mos. or longer – 0 pts.
    b. Nevada Resident - Not lived in same residence 6 mos. or longer – 1 pt. _____
    c. Homeless or Non-Nevada Resident– 2pts.
9. Substance Abuse
    a. Otherwise – 0 pts.
    b. Prior multiple arrests for drug possession/alcohol/drunkenness - 2 pts. _____
10. Verified Cell Phone
    a. Yes – 0 pts. (list) _____
    b. No – 2 pts.   _____

                                                 Total Score: _____

Scored Risk Level: 0-4 pts. LOW   5 –10 pts. MODERATE   11+ pts. HIGHER

Over-Ride? _____ Yes ___ No

Over Ride Reason(s): ___ Mental Health ____ Disability ____ Gang Member ____ Flight Risk

Other Reason: _____

Final Recommended Risk Level;   _____ LOW   _____MODERATE   _____ HIGHER